

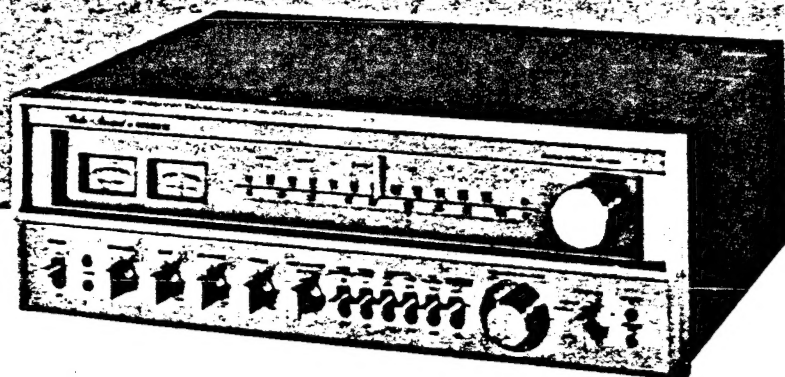
SERVICE MANUAL



FISHER

RS-1058

Stereo Receiver
(EUROPE)



FIRST NAME IN HIGH FIDELITY

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DISASSEMBLY INSTRUCTIONS

Removal of Chassis from Cabinet

1. Remove 4 screws from left and right sides of cabinet.
2. Separate cabinet from chassis.
3. Remove 18 screws from bottom of cabinet. (Do Not Remove Leg From Bottom Of Cabinet).
4. Separate bottom of cabinet from chassis.

Removal of Front Panel Assembly

1. Remove all Knobs
2. Remove 4 screws from top of panel.
3. Remove 5 screws from bottom of Panel.
4. Remove nut from "Function", "Speaker" and "Tape monitor" switches located on Front Panel Assembly.
5. Separate Front Panel Assembly from chassis.

Removal of Meters

1. Remove One screw and Meter Cover.
2. Unsolder leads from meter terminals.
3. Grasp Meter firmly and pull back separating Meter from panel.

Removal of Slide Rail Pointer

1. Remove Metal Slide Pointer from Slide Rail Pointer.
2. Remove 2 screws from top of Slide Rail Pointer.

Removal of AM-FM Stereo Function Indicator Lamps

1. Grasp base of lamp with long-nosed Pliers and Carefully extract from grommet holder.
2. Unsolder AM-FM Indicator Lamp from P.C. Board.

Removal and Replacement of Dial Lamps

1. Remove Dial P.C. Board from Shelter Light with two flaps straight.
2. Grasp Dial Lamp and extract from lamp grommet holder.

Removal of Front End

1. Unscrew 2 screws from Drum. (Do Not Remove Dial String From Drum).
2. Remove 4 screws releasing clip holding Front End.
3. Remove 4 screws from bottom of Front End.

Testing and troubleshooting any of the P.C. boards do not require removal since all component parts are top board mounted. For underneath board inspection purposes or when a defective component is to be unsoldered and replaced, the P.C. board can be sufficiently turned over by only removing the hold down hardware. Where it necessitates complete removal of any individual board then proceed as follows.

Removal of AM-FM RF/IF/MPX Amp P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 4 hold down screws.

Removal of Power Amp P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 5 hold down screws.

Removal of Power Supply P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 4 hold down screws.

Removal of EQ-Amp P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 5 hold down screws.

Removal of Speaker Protection P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 5 hold down screws.

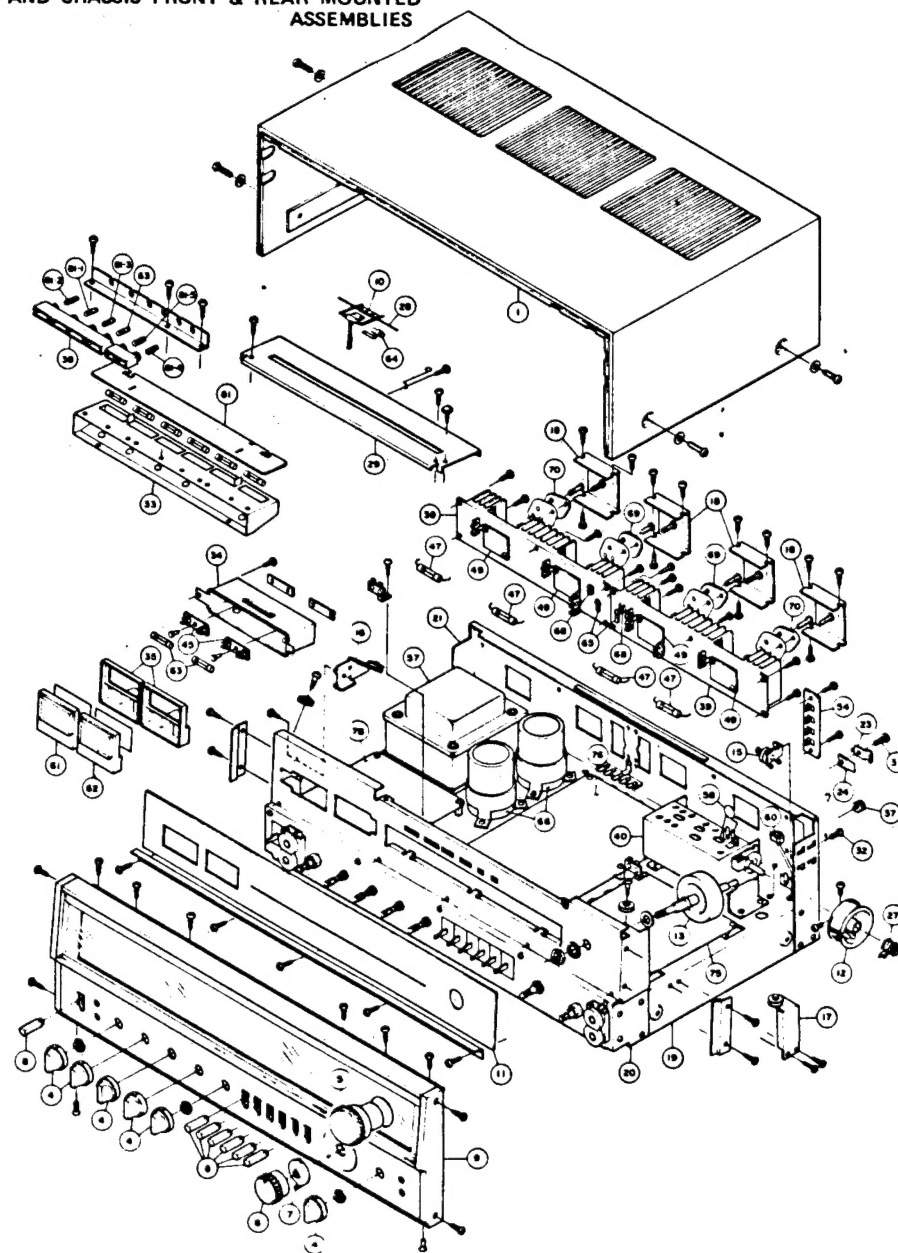
Removal of Tone Control Amp P.C. Board

1. Unsolder wire wraps from terminals.
2. Remove 6 screws from 6 Lever switch.
3. Remove 3 nuts from variable resistors.

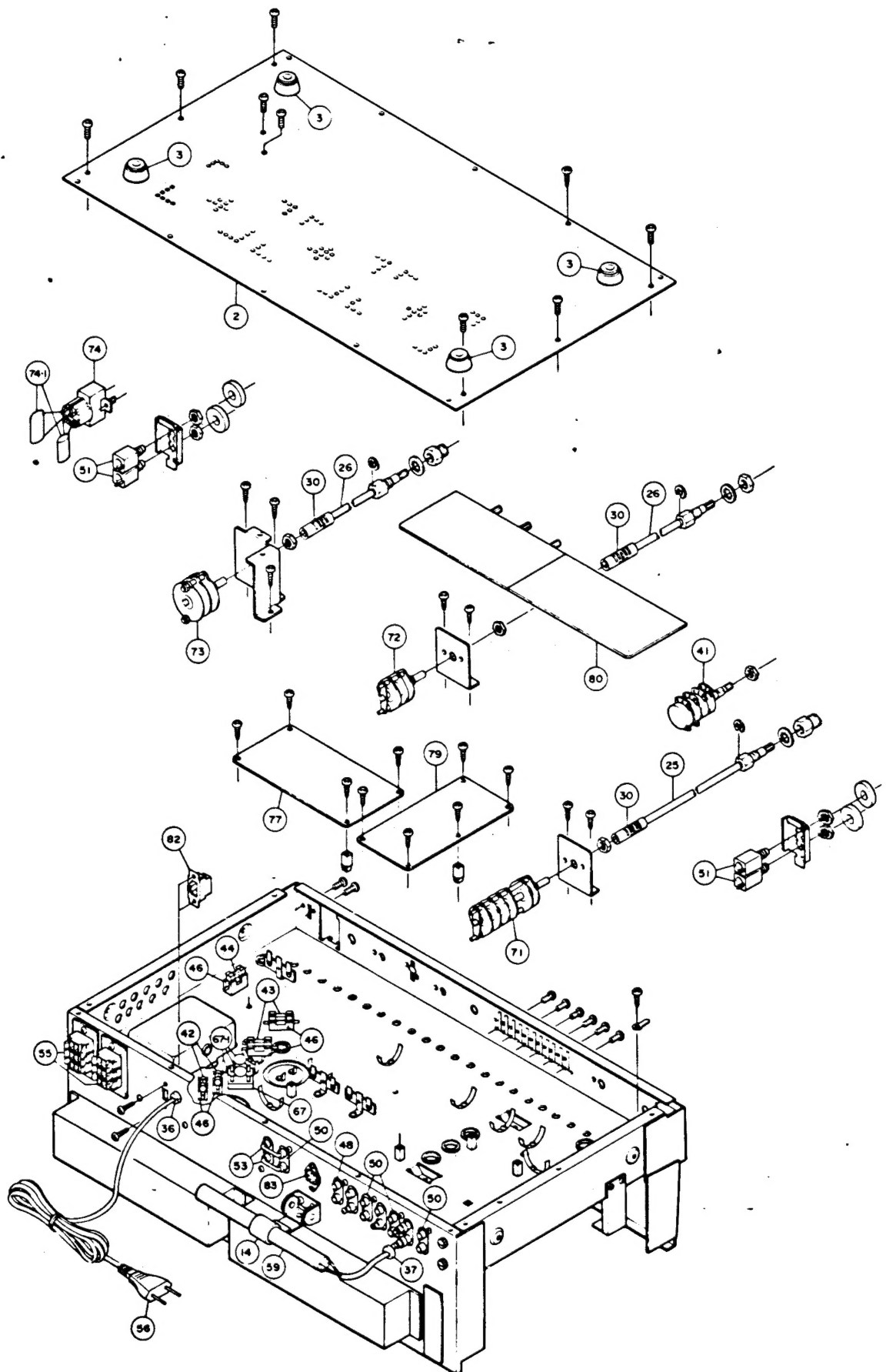
Removal of Power Transistor (Q01~Q04)

1. Remove Cover 4 screws from top and bottom of Plate Heat Sink.
2. Remove 2 screws holding Power Transistor.

EXPLODED VIEW OF CABINET AND CHASSIS FRONT & REAR MOUNTED ASSEMBLIES



EXPLODED VIEW OF CHASSIS BOTTOM MOUNTED ASSEMBLIES



PARTS LIST

CABINET PARTS LIST

Ref. No.	Part Number	Description
1	1310 1101 08700	Cabinet Assy
2 *	1312 1105 17800	Plate Bottom
3 *	1312 1801 13200	Leg

APPEARANCE PARTS LIST

Ref. No.	Part Number	Description
4	1310 1001 35500	Knob, Controls
5	1310 1001 41500	Knob, Tuning
6	1310 1001 36000	Knob, Volume
7	1312 1601 40400	Knob, Balance
8	1310 1001 36100	Knob, Lever Switch
9	1310 3016 24900	Panel Decorate Assy
10	1310 3011 16800	Dial Pointer Assy
11	1312 1201 28500	Plate Dial

CHASSIS PARTS LIST

Ref. No.	Part Number	Description
12	1310 3002 11300	Drum Assy Tuning Gang
13	1310 3003 19100	Tuning Shaft Assy
14	1310 3008 41702	Support, Antenna Assy
15 *	1310 3020 05800	Pulley Assy Panel Rear
16 *	1310 3020 07400	Pulley Assy Panel Front (Left)
17 *	1310 3020 07500	Pulley Assy Chassis (Right)
18	1312 1410 15400	Cover Power Transistor
19 *	1312 3301 21900	Chassis
20 *	1312 3305 20300	Panel Front
21 *	1312 3306 22612	Panel Rear
23	1312 3612 00400	Clamp, 75 ohm Coax.
24	1312 3621 00500	Base, Coax. Clamp
25	1312 4103 11400	Metal Shaft Rotary SW (Long)
26	1312 4103 11500	Metal Shaft Rotary SW (Short)
27	1312 4111 00400	Tension Spring
28	1312 4112 10200	Dial Cord
29	1312 4120 11700	Slide Rail Dial Pointer
30	1312 4121 00100	Coupling (Nylon)
31	1312 4201 12701	Screw, Panel Rear
32	1312 4201 15400	Screw, Panel Rear (Ground)
33	1312 6110 23701	Housing, Dial Lamp P.C.B.
34	1312 6110 26100	Housing, Meter Lamp
35	1312 6110 26200	Housing, Meter
36	1312 6111 14200	Bushing, Line Cord
37	1312 6111 14200	Bushing, AM Antenna Lead
38	1312 6111 19800	Housing, Stereo Beacon Lamp
39	1312 6201 23200	Heat Sink

ELECTRICAL PARTS LIST

Ref. No.	Part Number	Description
40	4 1259 20390	Front End
(Component parts used in Front End are not serviceable and available.)		
41	4 2229 25490	VR A-50k, MN-250k
42	4 2349 21570	Fuse 6.3AT (+, -B)
43	4 2349 20380	Fuse 1.0AT (+, -20V)
44	4 2349 20590	Fuse 4.0AT (6.3V)
45	4 2359 20160	Holder Lamp
46	4 2359 21021	Fuse Holder
47	4 2349 21380	Fuse 5AT (+, -B Power)
48	4 2359 22130	RCA Pin Jack 2P
49	4 2359 22440	Socket Transistor
50	4 2359 22710	Socket 4P
51	4 2359 22730	Socket 1P

ELECTRICAL PARTS LIST

Ref. No.	Part Number	Description
52	4 2369 20561	Plug 1P
53	4 2369 21220	Short Plug
54	4 2379 21460	Terminal, Antenna Connector
55	4 2379 21570	Terminal, Speakers Connector
56 *	4 2439 20521	Power Cord
57 (T-1)	4 2519 24101	Power Trans
58	4 2539 20430	Peaking Coil 10 μ H (L01)
59	4 2579 25040	AM Antenna
60	4 2599 20300	Balun
61	4 5119 20670	Meter Signal Strength
62	4 5119 20680	Meter, Center of Channel
63	4 6129 20280	Pilot Lamp 6.3V 250mA
64	4 6129 20592	Small Lamp Indicator 5V 60mA
65	H11-PTH487A-BE	Posistor Protector
R15	R2HCPK222A	Resistor Solid 2.2k ohm 1/2W \pm 10 %
66	4 2239 21160	Capacitor Electrolytic 15000 μ F 63V
(C02,03)		
C08	C1CRE-227A	Cap. Electrolytic 220 μ F 16V
C09	C1EUEM475A	Cap. Alsicon 4.7 μ F 25V \pm 20 %
C10	C1HYDZ 473A	Cap. Ceramic 0.047 μ F 50V +80, -20%
C11	C1HFRM104A	Cap. Mylar 0.1 μ F 50V \pm 20 %
67	DDD-S5VB20	Diode S5VB20 (Power Supply)
67-1	C2HYDP103A	Cap. Ceramic 0.01 μ F 500V +100, -0 %
(C04,05 06,07)		
68	DAA-STV-3H-W	Diode STV-3H (Idling Bias)
69	TNN-2SD287A-Q	TR 2SD287A-Q
(Q01,02)		
70	TNN-2SB539A-Q	TR 2SB539A-Q
(Q03,04)		
R03, 04	R3DXPK561A	Resistor Oxide Metal Film 560 ohm 2W \pm 10 %
R05,06	R2HXPk151A	Resistor Oxide Metal Film 150 ohm 1/2W \pm 10 %
R07,08	R2EDPJ274A	Resistor Solid 270K 1/4W \pm 5%
R09,10	R3DXPK56A	Resistor Oxide Metal Film 560ohm 2W \pm 10 %
R11,12	R2HXPk151A	Resistor Oxide Metal Film 150 ohm 1/2W \pm 10 %
R13,14	R3DXPK100A	Resistor Oxide Metal Film 10 ohm 2W \pm 10 %
71 (S-01)	4 2319 34150	Switch Rotary Function
72 (S-02)	4 2319 34130	Switch Rotary Tape Monitor
73 (S-09)	4 2319 34140	Switch Rotary Speaker
74 (S-10)	4 2312 00150	Switch Lever Power
74-1	C2EHRM103A	Capacitor Polypropylene 0.01 μ F 250V \pm 20 %
(C01)		
75 *	1310 4001 72700	AM, FM RF/IF MPXPC Assy
76 *	1310 4001 72803	Power AMP PC Assy
77 *	1310 4001 72900	Protector PC Assy
78 *	1310 4001 73002	Power Supply PC Assy
79 *	1310 4001 73101	EQ PC Assy
80 *	1310 4001 74900	Pre Tone PC Assy
81 *	1310 4001 72163	Dial Lamp PC Assy
82	4 2319 21531	Slide Switch, Volt Select
83	4 2359 20190	Din Socket

NOTE: * Asterisk indicates not a service part.

RECOMMENDED TEST EQUIPMENT

The following test equipment is recommended to completely test and align the Receiver.

- Line Voltage Isolation Transformer.
- AC DC Multimeter.
- Accurately Calibrated AC Voltmeter.
- Oscilloscope (Flat to 100 KHz Minimum)
- Low-Distortion Audio Sine-Wave Generator
- Harmonic Distortion Analyzer
- Two (2) Load Resistors, 8-ohms, 250 Watts (Minimum Rating)
- Low-Distortion AM-FM Signal Generator
- 10.7 MHz Sweep Generator
- Multiplex Generator
- 455 KHz Sweep Generator

HARMONIC DISTORTION TEST

CAUTION: Limit the following tests to no more than ten minutes each. Use 8-ohm resistors with a minimum power rating of 250 watts when connecting a load across the SPEAKERS terminals.

CONTROL SETTINGS:

Unplug the AC power cord and set the front panel controls as follows.

BASS, MID, TREBLE, and BALANCE controls to center positions

POWER switch to OFF

SPEAKERS switch to PHONES

FUNCTION switch to AUX

HIGH & LOW FILTER, MONO MODE, LOUDNESS CON-

TOUR and TAPE MONITOR switch to OFF and SOURCE

VOLUME control to MINIMUM position

LEFT CHANNEL DRIVEN

ONE CHANNEL DRIVEN:

1) Connect a low distortion audio generator to LEFT AUX IN jack. Set generator frequency to 1 KHz and output to minimum.

2) Connect an 8-ohm load resistor between SPEAKERS MAIN LEFT and COM terminals.

Connect a Harmonic Distortion analyzer and an AC VTVM in parallel across the 8-ohm load.

3) Connect the AC power cord and set SPEAKERS switch to MAIN. Turn VOLUME control to MAX.

4) Increase generator output for RS-1058 90W RMS (26.8V across the 8-ohm load) Harmonic Distortion Analyzer should measure 0.15% distortion or less.

5) Repeat steps 1 through 4 for RIGHT CHANNEL.

BOTH CHANNELS DRIVEN

Connect 8-ohm load resistors across LEFT and RIGHT MAIN SPEAKERS terminals. Push down "MONO" switch. Adjust generator output and "BALANCE" control for 90W at Left and Right Channels 26.8V across the 8-ohm loads.

Harmonic Distortion Analyzer should measure 0.1% distortion or less at each channel.

ADJUSTMENT OF THE POWER AMP. P.C. BOARD

BEFORE ADJUSTMENT

Disconnect the PRE OUT/MAIN IN connector.

After the power switch is turned ON, allow a few minutes marking adjustment, to be sure of the most stable operation.

Connect dummy load resistors (8 ohm) to the speaker terminals.

Use DC V.T.V.M. or Circuit Tester (input impedance: More than 50k ohm/V)

(A) IDLING CURRENT ADJUSTMENT

Adjust VR01 (VR02) for an idling current of 30mA. Measure the voltage at both sides of R65 (R66) resistor (0.47 ohm) and Adjust VR01 (VR02) to indicate 14mV ± 2mV.

Note: Polarity of Emitter of Q01 (Q02) is (+) Mid-Point is (-).

(B) a. Turn the semi-fixed variable resistor slowly during adjustment.

b. Be careful of the polarity of each measurement point.


Nominal Specifications For Information Only.

RECEIVER	RS-1058
POWER AMPLIFIER SECTION Continuous RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with an 8 ohm load.	90Wx2
Power Bandwidth	20Hz/20kHz
Total Harmonic Distortion	0.1 %
PREAMPLIFIER SECTION Input Sensitivity and Impedance At rated output, 8-ohms at 1kHz Phono (1 and 2)	2mV/ 50k ohm
Phono (max input capability)	180mV
Auxiliary	150mV/100k ohm
Tape Monitor (1 and 2)	150mV/100k ohm
Hum & Noise (below rated output) Phono (1 and 2)	76 dB
Auxiliary	90 dB
Tape Monitor (1 and 2)	90 dB
Frequency Response Phono (RIAA EQUALIZED ±2 dB)	30Hz - 15kHz
Auxiliary input ±2 dB	20Hz - 20kHz
Tape Monitor input ±2 dB	20Hz - 20kHz
Bass Control Range (at 100Hz)	±10 dB
Treble Control Range (at 10kHz)	±10 dB
Mid Range (at 1.5kHz)	±10 dB
Loudness Contour (at 30 dB volume attenuation)	+8 dB at 100Hz +4 dB at 10kHz
High Filter	-6 dB (5kHz)
Low Filter	-6 dB (60Hz)
Separation (Stereo) @ 1kHz	40 dB
POWER SECTION INPUT	150mV/100k ohm
FM TUNER SECTION	
Usable Sensitivity Mono	1.7 μV/ 9.8 dBf
Stereo	4.3 μV/ 17.9 dBf
50 dB Quieting Sensitivity Mono	2.5 μV/ 13.2 dBf
Stereo	34 μV/ 35.9 dBf
Capture Ratio	0.8 dB
All Channel Selectivity	75 dB
Image Response Rejection	80 dB
Spurious Response Rejection	100 dB
AM Rejection	65 dB
Signal-to-Noise Ratio (Mono & Stereo)	75/70 dB
Total Harm. Distortion (Mono & Stereo)	0.15/ 0.25 %
50 dB Quieting Sensitivity THD Mono	0.3 %
Stereo	0.4 %
Stereo Separation (1 kHz/10 kHz)	45/36 dB
Sub-Carrier Suppression (19/38 kHz)	60/70 dB
AM TUNER SECTION	
Sensitivity	300 μV/m
Selectivity	43 dB
Signal-to-Noise Ratio	65 dB
Image Frequency Rejection	56 dB
IF Rejection	70 dB
GENERAL SECTION	
Power Requirements (50/60 Hz)	110V/220V
Power Consumption	500W/612VA
AC Outlets	
Dimensions H x W x D (Inches)	6-13/16" x 20-3/4" x 14-1/4"
Weight (Lbs.)	32.4

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AM-FM MULTIPLEX ALIGNMENT



AM ALIGNMENT

Step	Adjusting circuit	Connection		SG. frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to VC4.	Connect oscilloscope to test point Pin No. 8	455 KHz	Near max. capacity of VC at position with no signal.	AM 1st 9-21310 AM DET 9-21291	 455 KHz
2	RF	Connect standard loop antenna to output terminal of SG. Place receiver 2 feet from loop antenna	Connect V.T.V.M. to Pin No. 8	600 KHz (400Hz, 30 % modulation)	600 KHz	AM ANT 9-25040 AM OSC 9-20880	Max.
3				1400 KHz (400Hz, 30 % modulation)	1400 KHz	TC 5 TC 6	Max.
4	Repeat adjustments.						

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator, SG, V.T.V.M. and oscilloscope.

4. Function switch to "AM."
5. Use a screwdriver with plastic grip for all adjustments.

FM ALIGNMENT

Step	Adjusting circuit	Connection		SG.frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to test point VC3 through 0.01 μ F.	Connect oscilloscope to test point TP 7 IC 02 Pin No. 13	10.7 MHz (none modulation)	Near max.capacity of VC. at position with no signal.	IFT In FRONT END	 10.7MHz
2	Ratio Det.		Connect oscilloscope to test point TP 1			FM QUADRA TURE COIL. 9-21320	
3	RF	Connect FM SG. to FM ANT terminals.	Connect V.T.V.M. to speaker terminal.	90 MHz (400 Hz, 30 % modulation)	90 MHz	LA LR	Max.
4				106 MHz (400 Hz, 30 % modulation)	106 MHz	TCA TCR	Max.
5	Repeat adjustments.						

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM ANT input impedance is 300 ohm.

4. Function switch to "FM."
5. Use a screwdriver with plastic grip for all adjustments.

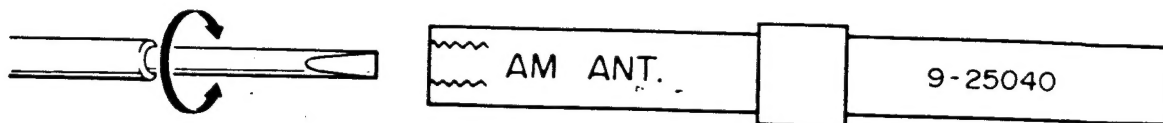
FM MPX ALIGNMENT

Step	Adjusting circuit	Connection		Position of tuning dial	Adjustment	
		Input	Output			
1	PLL IC FO (19 KHz) Adjustment	None	Connect Frequency counter or synchroscope to TP 2	Near max. capacity of VC. at position with no signal.	Adjust VR 03(4.7K-B) so that 19 KHz may be indicated on the frequency counter or synchroscope.	
2	FM STEREO Signal Separation	Connect FM stereo SG to FM ANT terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from L Ch.	Connect V.T.V.M. to output terminal (R channel).		VR 02 (1K-B)	V.T.V.M. Min.
		Connect FM stereo SG to FM ANT terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from R Ch.	Connect V.T.V.M. to output terminal (L channel)			
3	Repeat steps 1, 2, Set at position with max. channel separation.					

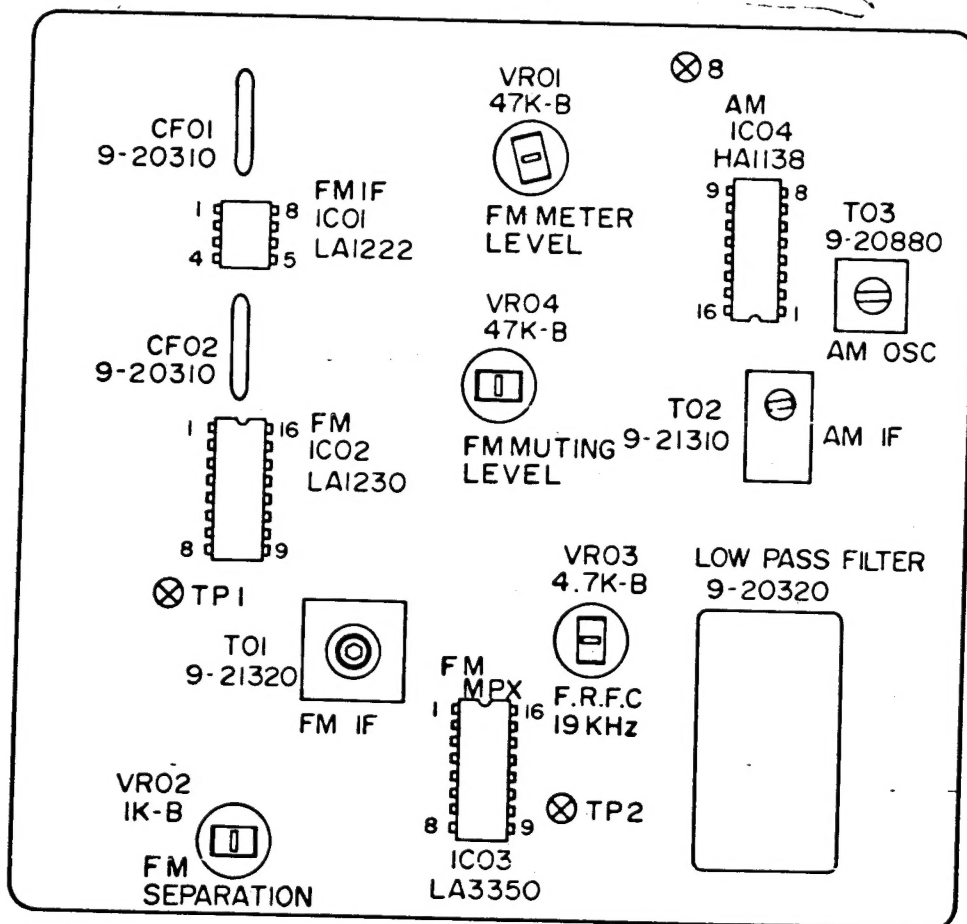
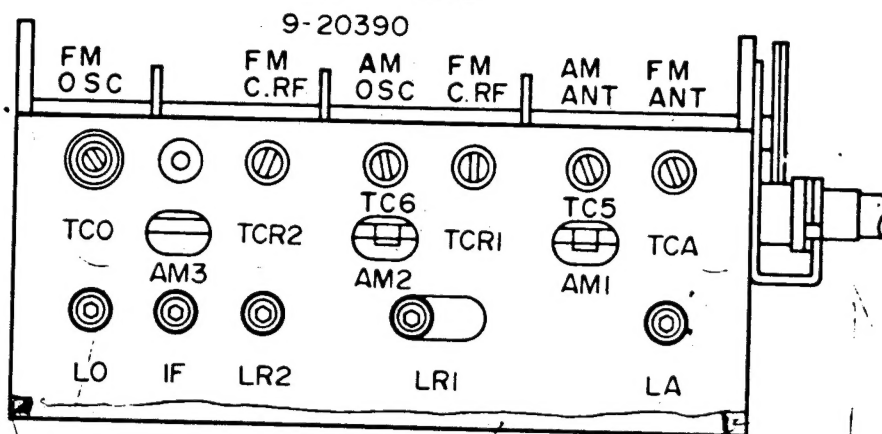
1. Variable capacitor completely closed.
2. Connect FM stereo SG and V.T.V.M.

3. Function switch to "FM"
4. Use a screwdriver with plastic grip for all adjustments.

AM-FM RF/IF MPX BOARD LAYOUT

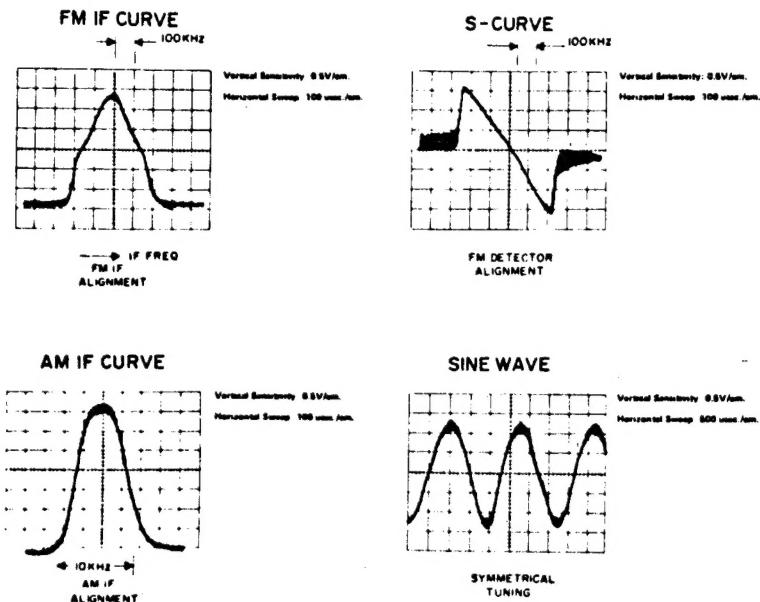


FRONT END

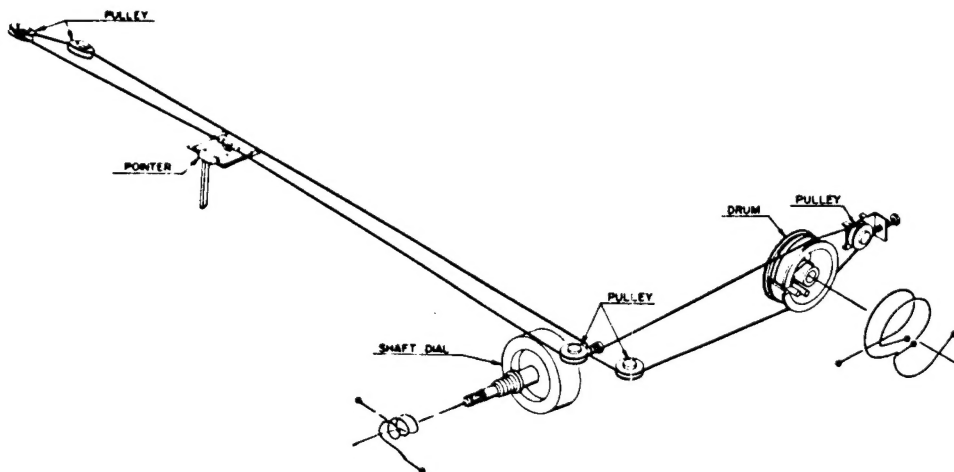


ALIGNMENT WAVE FORMS

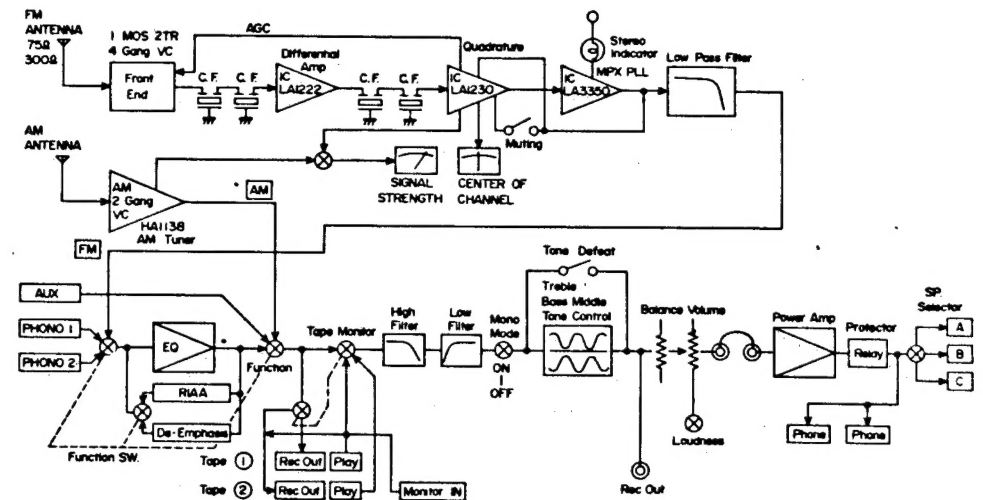
WITH OSCILLOSCOPE TIME BASE SETTINGS



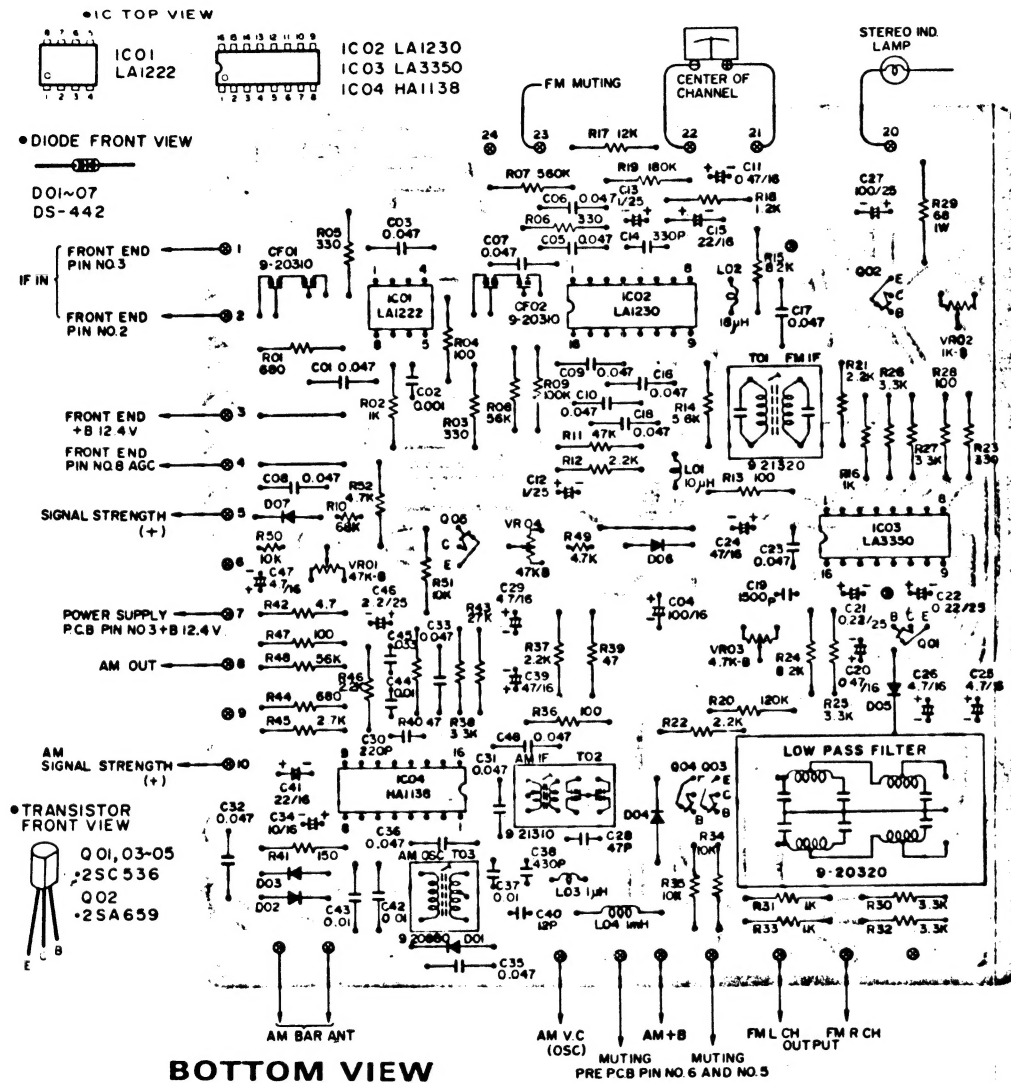
DIAL CORD STRINGING



BLOCK DIAGRAM



AM FM RF/IF MPX P.C.BOARD



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC01 LA1222	1.39V	1.39V		11.5V	12.4V	1.35V	9.7V	12.4V								
IC02 LA1230	2.85V	2.85V	2.85V	0V	0V	5.92V	5.73V	5.75V	5.75V	5.75V	5.75V	5.75V	5.75V	5.75V	5.75V	5.75V
IC03 LA3350	10.7V	2.74V	4.71V	0.08V	0.11V	11.0V	0V	0.34V	0.34V	0.34V	0.34V	0.34V	0.34V	0.34V	0.34V	0.34V
IC04 HA1138	11.7V	2.79V	11.7V	11.7V	4.8V	9.86V	2.0V	0.88V	0.06V	3.8V	4.3V	11.8V	2.76V	2.77V	2.72V	0V

PARTS LIST

AM FM RF/IF MPX PCB Assy 1310 4001 72700

Ref. No.	Part Number	Description
L01	4 2539 20370	Coil 10 μ H $\pm 10\%$
L02	4 2539 20380	Coil 18 μ H $\pm 5\%$
L03	4 2539 20310	Coil 1 μ H $\pm 5\%$
L04	4 2539 20170	Choke Coil 1 mH
T01	4 2569 21320	IF Trans FM
T02	4 2569 21310	IF Trans AM
T03	4 2589 20880	OSC Coil AM
VR01	4 2229 25100	Semi-Fixed VR 47k-B
VR02	4 2229 22910	VR 1k-B
VR03	4 2229 23880	VR 4.7k-B
VR04	4 2229 25100	Semi-Fixed VR 47k-B
	4 2279 20320	Low Pass Filter
	4 2359 23120	Socket 16P
CF01,02	4 2279 20310	Ceramic Filter

CAPACITORS

C01	C1HYSZ473A	Ceramic 0.047 μ F 50V +80,-20%
C02	C1HYSZJ02A	Ceramic 0.001 μ F 50V +80,-20%
C03	C1HYSZ473A	Ceramic 0.047 μ F 50V +80,-20%
C04	C1CRB-107A	Electrolytic 100 μ F 16V
C05,06	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20%
C11	C1CUEX474A	Alsilcon 0.47 μ F 16V +40,-20%
C12,13	C1EUM105A	Alsilcon 1 μ F 25V $\pm 20\%$
C14	C1HCDK331SL	Ceramic 330pF 50V $\pm 10\%$
C15	C1CTRM226A	Tantalum 22 μ F 16V $\pm 20\%$
C16,17	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20%
C18		
C19	C1HSEJ152A	Styrol 1500pF 50V $\pm 5\%$
C20	C1CUEX474A	Alsilcon 0.47 μ F 16V +40,-20%
C21,22	C1EUM224A	Alsilcon 0.22 μ F 25V $\pm 20\%$
C23	C1HFRM473A	Mylar 0.047 μ F 50V $\pm 20\%$
C24	C1CRB-476A	Electrolytic 47 μ F 16V
C25,26	C1CUEX475A	Alsilcon 4.7 μ F 16V +40,-20%
C27	C1ERB-107A	Electrolytic 100 μ F 25V
C28	C1HCSK470SL	Ceramic 47pF 50V $\pm 10\%$
C29	C1CRB-475A	Electrolytic 4.7 μ F 16V
C30	C1HCDK221SL	Ceramic 220pF 50V $\pm 10\%$
C31,32	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20%
C33		
C34	C1CRB-106A	Electrolytic 10 μ F 16V
C35,36	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20%
C37	C1HFRM103A	Mylar 0.01 μ F 50V $\pm 20\%$
C38	C1HSEJ431A	Styrol 430pF 50V $\pm 5\%$
C39	C1CRB-476A	Electrolytic 47 μ F 16V
C40	C1HCDJ120SL	Ceramic 12pF 50V
C41	C1CRB-226A	Electrolytic 22 μ F 16V
C42,43	C1HYDZ103A	Ceramic 0.01 μ F 50V +80,-20%
C44	C1HFRM103A	Mylar 0.01 μ F 50V $\pm 20\%$
C45	C1HFRM333A	Mylar 0.033 μ F 50V $\pm 20\%$
C46	C1EUM225A	Alsilcon 2.2 μ F 25V $\pm 20\%$
C47	C1CUEX475A	Alsilcon 4.7 μ F 16V +40,-20%
C48	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20%

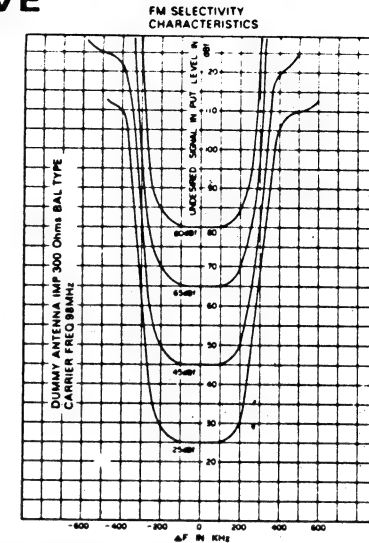
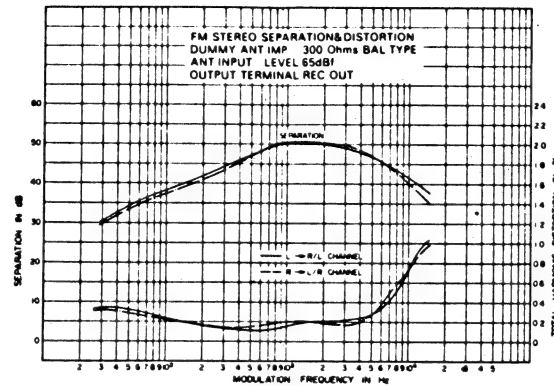
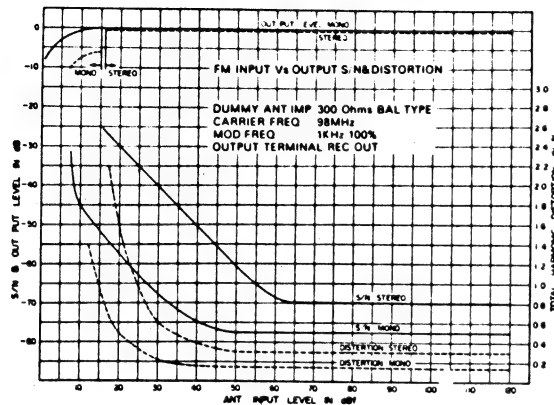
Ref. No.	Part Number	Description
D01,02	2055 9040 44210	Diode DS-442
Q01	2065 0131 22210	IC LA1222
Q02	2065 0151 23010	IC LA 1230
Q03	2065 0743 35019	IC LA-3350SS
Q04	1KK-HA1138	IC HA1138
Q01	2035 5100 53640	TR 2SC536 D or E
Q02	2035 6800 65940	TR 2SA659 D or E
Q03,04	2035 5100 53640	TR 2SC536 D or E

RESISTORS

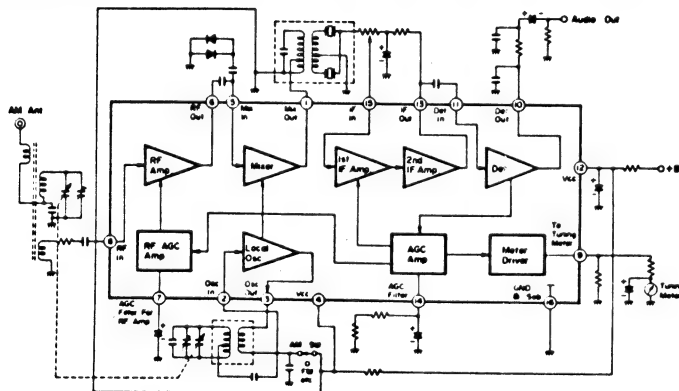
R01	R2EDSJ681A	Carbon 680	1/4W $\pm 5\%$
R02	R2EDSJ102A	Carbon 1k	1/4W $\pm 5\%$
R03	R2EDSJ331A	Carbon 330	1/4W $\pm 5\%$
R04	R2EDSJ101A	Carbon 100	1/4W $\pm 5\%$
R05,06	R2EDSJ331A	Carbon 330	1/4W $\pm 5\%$
R07	R2EDSJ564A	Carbon 560k	1/4W $\pm 5\%$
R08	R2EDSJ563A	Carbon 56k	1/4W $\pm 5\%$
R09	R2EDSJ104A	Carbon 100k	1/4W $\pm 5\%$
R10	R2EDSJ683A	Carbon 68k	1/4W $\pm 5\%$
R11	R2EDSJ473A	Carbon 47k	1/4W $\pm 5\%$
R12	R2EDSJ222A	Carbon 2.2k	1/4W $\pm 5\%$
R13	R2EDSJ101A	Carbon 100	1/4W $\pm 5\%$
R14	R2EDSJ562A	Carbon 5.6k	1/4W $\pm 5\%$
R15	R2EDSJ822A	Carbon 8.2k	1/4W $\pm 5\%$
R16	R2EDSJ102A	Carbon 1k	1/4W $\pm 5\%$
R17	R2EDSJ123A	Carbon 12k	1/4W $\pm 5\%$
R18	R2EDSJ122A	Carbon 1.2k	1/4W $\pm 5\%$
R19	R2EDSJ184A	Carbon 180k	1/4W $\pm 5\%$
R20	R2EDSJ124A	Carbon 120k	1/4W $\pm 5\%$
R21,22	R2EDSJ222A	Carbon 2.2k	1/4W $\pm 5\%$
R23	R2EDSJ331A	Carbon 330	1/4W $\pm 5\%$
R24	R2EDSJ822A	Carbon 8.2k	1/4W $\pm 5\%$
R25,26	R2EDSJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R27			
R28	R2EDSJ101A	Carbon 100	1/4W $\pm 5\%$
R29	R3AXBJ680A	Oxide Metal Film 68 1W	$\pm 5\%$
R30	R2EDSJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R31	R2EDSJ102A	Carbon 1k	1/4W $\pm 5\%$
R32	R2EDSJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R33	R2EDSJ102A	Carbon 1k	1/4W $\pm 5\%$
R34,35	R2EDSJ103A	Carbon 10k	1/4W $\pm 5\%$
R36	R2EDSJ101A	Carbon 100	1/4W $\pm 5\%$
R37	R2EDSJ222A	Carbon 2.2k	1/4W $\pm 5\%$
R38	R2EDSJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R39,40	R2EDSJ470A	Carbon 47	1/4W $\pm 5\%$
R41	R2EDSJ151A	Carbon 150	1/4W $\pm 5\%$
R42	R2EDSJ477A	Carbon 4.7	1/4W $\pm 5\%$
R43	R2EDSJ273A	Carbon 27k	1/4W $\pm 5\%$
R44	R2EDSJ681A	Carbon 680	1/4W $\pm 5\%$
R45	R2EDSJ272A	Carbon 2.7k	1/4W $\pm 5\%$
R46	R2EDSJ222A	Carbon 2.2k	1/4W $\pm 5\%$
R47	R2EDSJ101A	Carbon 100	1/4W $\pm 5\%$
R48	R2EDSJ563A	Carbon 56k	1/4W $\pm 5\%$
R49	R2EDSJ472A	Carbon 4.7k	1/4W $\pm 5\%$
R50	R2EDSJ103A	Carbon 10k	1/4W $\pm 5\%$
R51	R2EDSJ103A	Carbon 10k	1/4W $\pm 5\%$
R52	R2EDSJ472A	Carbon 4.7k	1/4W $\pm 5\%$

TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SC536	1.09V	0.56V	0.56V
Q02	2SA659	5.33V	5.36V	6.12V
Q03,04	2SC536	0V	0V	0V
Q05	2SC536	0.03V	3.78V	0V

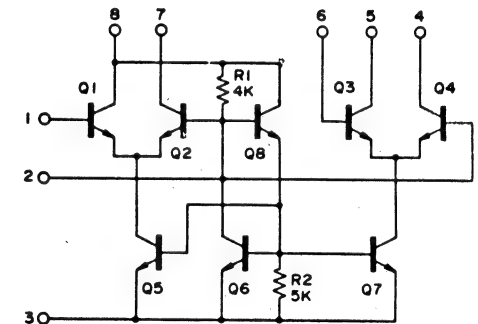
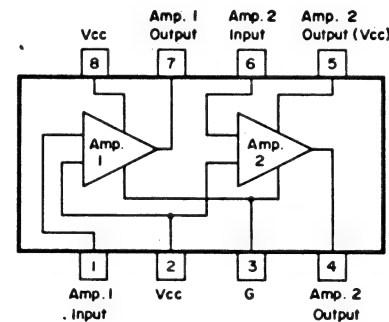
FM TUNER SECTION CHARACTERISTIC CURVE



AM RF IF IC HA1138 SIGNAL FLOW



FM IF IC LA1222 SIGNAL FLOW AND EQUIVALENT DIAGRAM



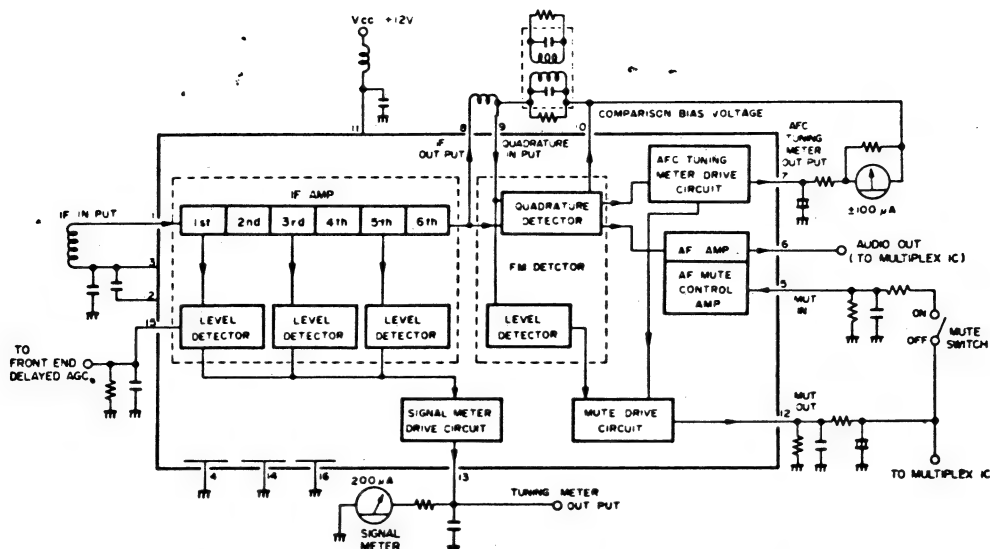
Signal enters R.F. AMP of I.C. where it is amplified. The converter section consists of a mixer and a local oscillator. The output of the mixer stage contains two frequency components.

The 455 KHz component signal is then fed to the I.F. amplifier. The tuned Frequency of the I.F. filter is 455 KHz. When the I.F. signal appears at the low pass filter, the 455-KHz carrier component is then locked, allowing only its audio component to pass.

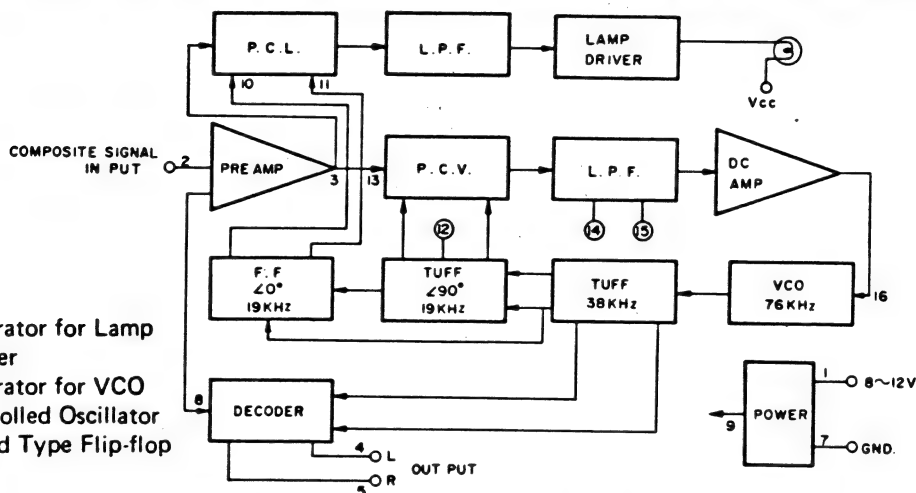
The circuit contains two steps of an independent differential amplification circuit, although the LA1222 is rated to operate on 12-volt power, it can also be used at low voltage, it also permits desired current limitation through insertion of a resistor between pins (2) and (8).

The limiting action by this circuit has current-limiting type limiter characteristics. The advantages that the current limiting type limiter are: It improves capture ratio against input variation, it does not deviate center frequencies, etc.

FM IF IC LA1230 SIGNAL FLOW



FM MPX IC LA3350 SIGNAL FLOW



P. C. L. : Phase Comparator for Lamp
 L. P. F. : Low Pass Filter
 P. C. V. : Phase Comparator for VCO
 VCO : Voltage controlled Oscillator
 TUFF : Direct coupled Type Flip-flop

The function of LA3350 is divided into two sections; the PLL section that reproduces the 38 KHz subcarrier, and the decoder section that switches the composite signal. The phase-duty cycle stability of the switching signal reproduced by the PLL determines the separation and the distortion factor of the demodulated signal. The phase comparator detects the phase difference between the VCO oscillator signal and the pilot signal. The detected output is in turn used as the control signal for the VCO.

Since higher harmonics are contained in this phase difference signal, it is necessary that a loop filter be used to eliminate these harmonics. The resulting DC component is applied to the VCO as the control signal. The characteristics of the loop filter practically determines the characteristics of the PLL. Stability of the signal synchronized to the input cannot be obtained unless the VCO itself is stable.

Here, only the demodulator circuit is essential as the FM stereo multiplex demodulator. The other components are the PLL as the 19 KHz selective circuit, and the stereo broadcast indicator circuit. The functions of these components are briefly described below.

The voltage controlled oscillator generates a saw-tooth wave of 76 KHz, and is frequency-controlled by the output from the DC amplifier. The frequency of the DC amplifier output is reduced to half, or 38 KHz, by means of a direct-coupled flip-flop circuit FF-1. This 38 KHz signal is applied to the demodulator circuit and demodulates the stereo composite signal. The FF-1 output is again reduced to 19 KHz by another direct-coupled flip-flop circuit FF-2.

This FF-2 output is then applied to a phase comparator, PC-1, and its phase is compared with that of the pilot signal contained in the input signal. The output from the FF-3 is 19 KHz and 90 degrees lagging in phase behind that of the FF-2 output. It is then applied to another phase comparator, PC-2, where the 19 KHz component of the input signal is detected and fed to the stereo broadcast indicator circuit to activate the pilot lamp.

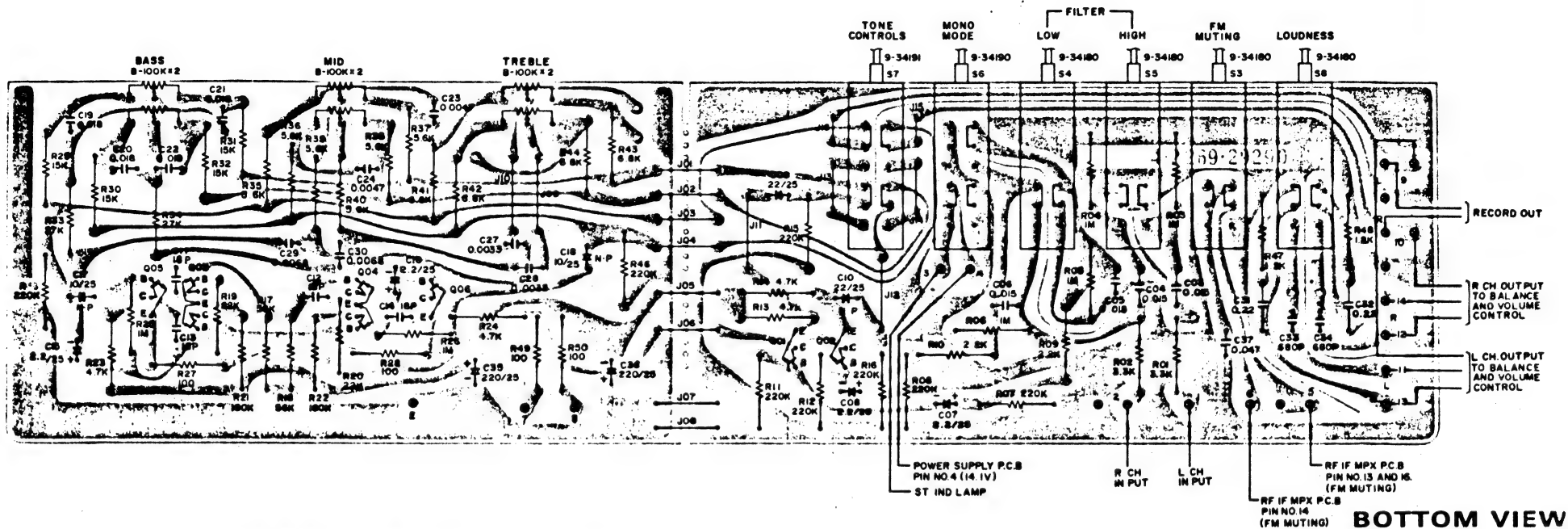
PARTS LIST

PRE TONE PCB Assy
1310 4001 73200

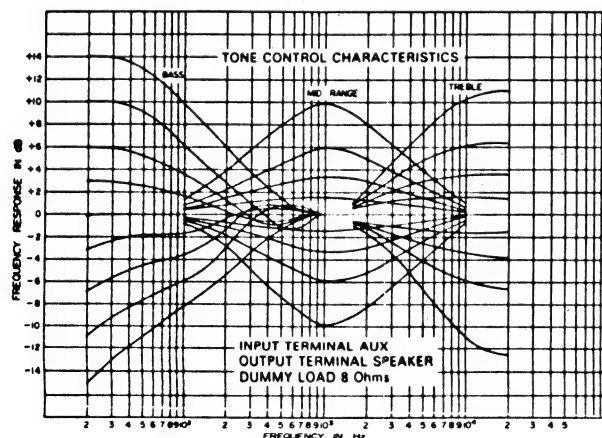
Ref. No.	Part Number	Description
	4 2229 25390	VR B-100kx2 (RS-1040)
S03	4 2319 34180	SW Lever FM Muting
S04	4 2319 34180	SW Lever Low Filter
S05	4 2319 34180	SW Lever High Filter
S06	4 2319 34190	SW Lever Mono Mode
S07	4 2319 34191	SW Lever Tone Controls
S08	4 2319 34180	SW Lever Loudness
CAPACITORS		
C03,04	C1HFAK153A	Mylar 0.015 μ F 50V $\pm 10\%$
05,06		
C07,08	C1EUEM225A	Alsicon 2.2 μ F 25V $\pm 20\%$
C09,10	C1EAEN226A	Electrolytic 22 μ F 25V $\pm 30\%$
C11,12	C1HCDK180SL	Ceramic 18pF 50V $\pm 10\%$
13,14		
C15,16	C1EUEM225A	Alsicon 2.2 μ F 25V $\pm 20\%$
C17,18	C1EAEN106A	Electrolytic 10 μ F 25V $\pm 30\%$
C19,20	C1HRK183A	Mylar 0.018 μ F 50V $\pm 10\%$
21,22		
C23,24	C1HFRK472A	Mylar 0.0047 μ F 50V $\pm 10\%$
C27,28	C1HFRK332A	Mylar 0.0033 μ F 50V $\pm 10\%$
C29,30	C1HFRK682A	Mylar 0.0068 μ F 50V $\pm 10\%$
C31,32	C1HFRK224A	Mylar 0.22 μ F 50V $\pm 10\%$
C33,34	C1HYDK681R	Ceramic 680pF 50V $\pm 10\%$
C35,36	C1ERE-227A	Electrolytic 220 μ F 25V
C37	C1HYDZ473A	Ceramic 0.047 μ F 50V +80, -20 %

Ref. No.	Part Number	Description
SEMICONDUCTORS		
Q01,02	2035 5151 57079	TR 2SC1570 LG
05,06		
Q03,04	TMM-2SA798-F	TR 2SA798 F
RESISTORS		
R01,02	R2EDVJ332A	Carbon 3.3k 1/4W $\pm 5\%$
R03,04	R2EDVJ105A	Carbon 1M 1/4W $\pm 5\%$
05,06		
R07,08	R2EDVJ224A	Carbon 220k 1/4W $\pm 5\%$
R09,10	R2EDVJ222A	Carbon 2.2k 1/W $\pm 5\%$
R11,12	R2EDVJ224A	Carbon 220k 1/4W $\pm 5\%$
R13,14	R2EDVJ472A	Carbon 4.7k 1/4W $\pm 5\%$
R15,16	R2EDVJ224A	Carbon 220k 1/4W $\pm 5\%$
R17,18	R2EDVJ563A	Carbon 56k 1/4W $\pm 5\%$
R19,20	R2EDVJ223A	Carbon 22k 1/4W $\pm 5\%$
R21,22	R2EDVJ184A	Carbon 180k 1/4W $\pm 5\%$
R23,24	R2EDVJ472A	Carbon 4.7k 1/4W $\pm 5\%$
R25,26	R2EDVJ105A	Carbon 1M 1/4W $\pm 5\%$
R27,28	R2EDVJ101A	Carbon 100 1/4W $\pm 5\%$
R29,30	R2EDVJ153A	Carbon 15k 1/4W $\pm 5\%$
31,32		
R33,34	R2EDVJ273A	Carbon 27k 1/4W $\pm 5\%$
R35,36	R2EDVJ562A	Carbon 5.6K 1/4W $\pm 5\%$
37,38		
39,40		
R41,42	R2EDVJ682A	Carbon 6.8K 1/4W $\pm 5\%$
43,44		
R45,46	R2EDVJ224A	Carbon 220K 1/4W $\pm 5\%$
R47,48	R2EDVJ122A	Carbon 1.2K 1/4W $\pm 5\%$
R49,50	R2EDVJ101A	Carbon 100 1/4W $\pm 5\%$

TONE CONTROL AND MODE SELECTOR P.C.BOARD

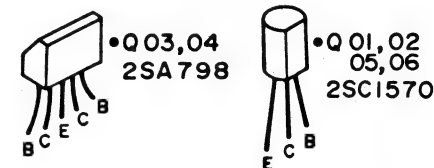


CHARACTERISTIC CURVE

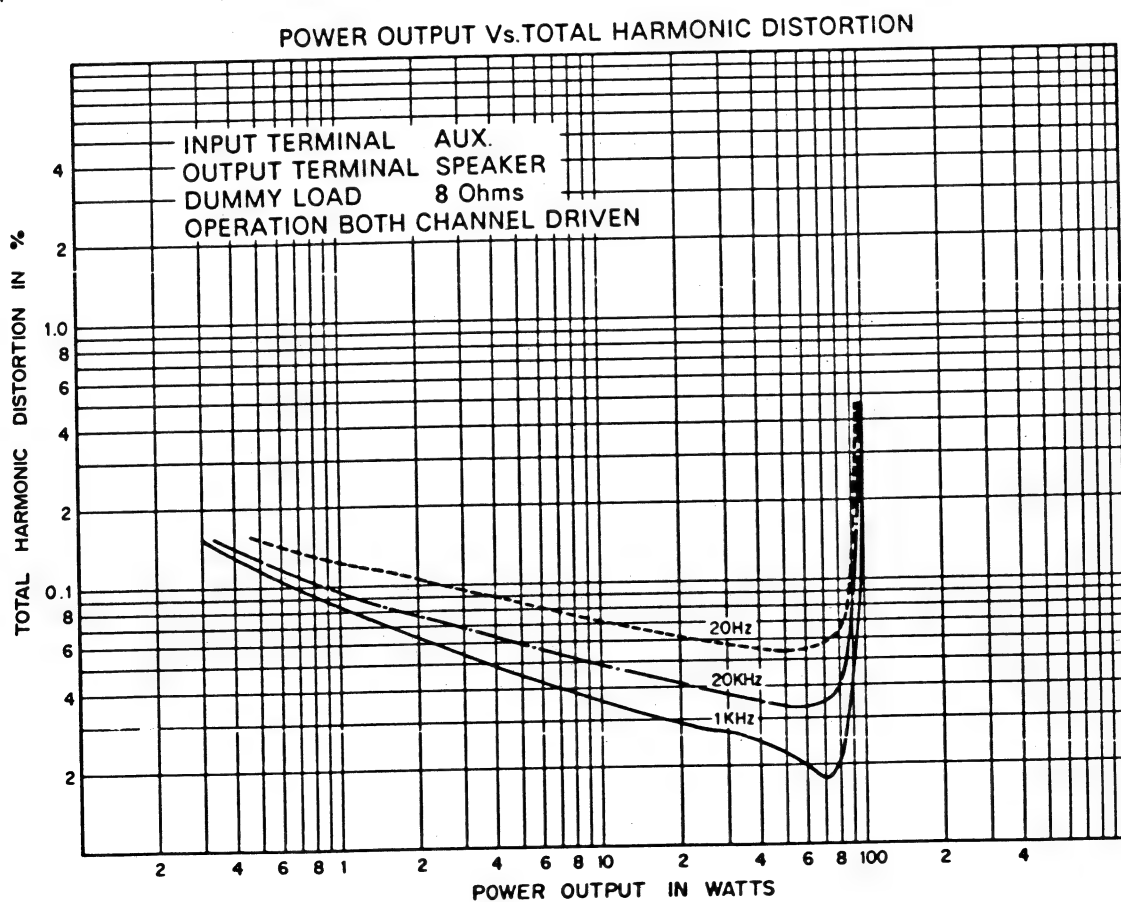
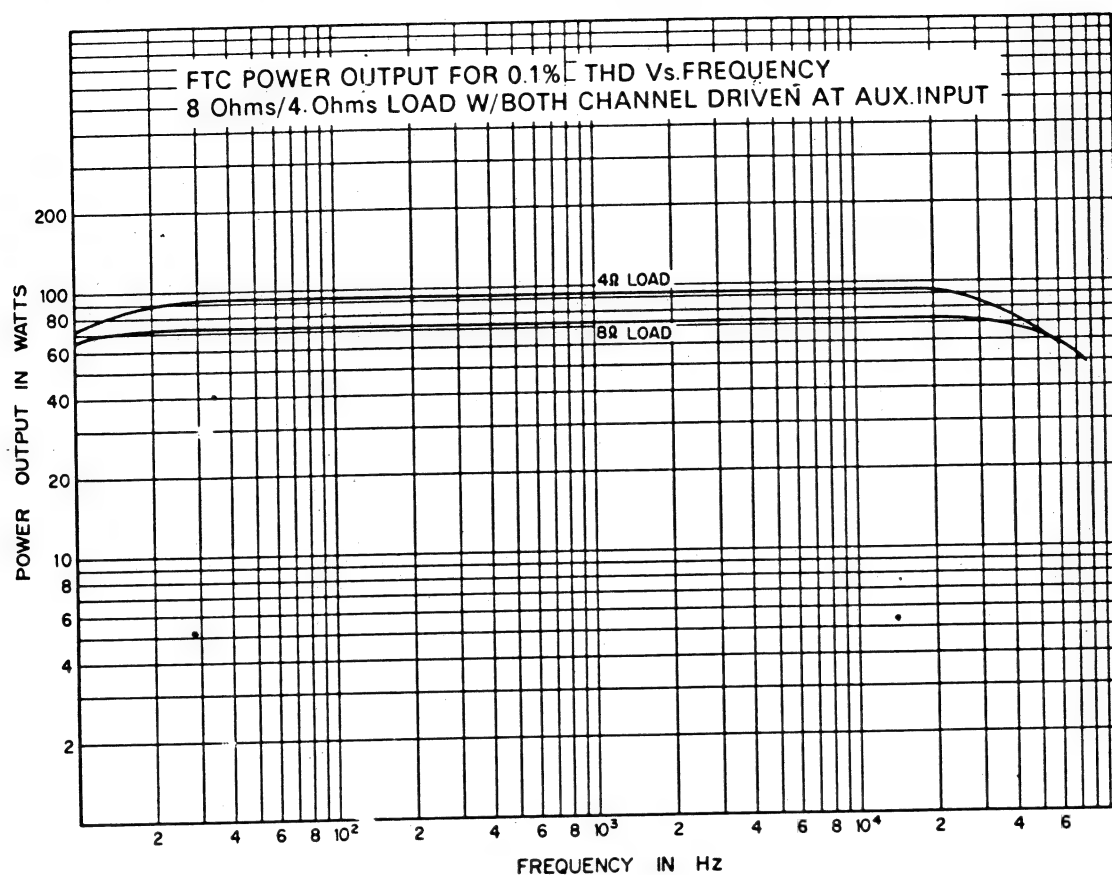


TRANSISTOR DC VOLTAGES						
SYMBOL NO.	DEVICE	B	C	E	1C	B
Q01,02	2SC1570	-1.55V	19.8V	-22V		
Q03,04	2SA798	0.09V	-17.9V	0.07V	-18.9V	0.015V
Q05,06	2SC1570	-17.9V	-0.1V	-18.4V		

TRANSISTOR FRONT VIEW



POWER AMPSECTION CHARACTERISTIC CURVE



PARTS LIST

POWER AMP PCB Assy
1310 4001 72803

Ref. No.	Part Number	Description
L01,02	4 2539 20281	Coil 2 μ H
VR01,02	4 2229 25500	VR B-330x1

CAPACITORS

C01,02	C1EUEM 225A	Alsicon 2.2 μ F	25V	$\pm 20\%$
C03,04	C1HCDK151SL	Ceramic 150pF	50V	$\pm 10\%$
C05,06	C1HCDD100SL	Ceramic 10pF	50V	$\pm 0.5\%$
C07,08	C1ERB-227A	Electrolytic 220 μ F	25V	
09,10				
C11,12	C1EUEM225A	Alsicon 2.2 μ F	25V	$\pm 20\%$
C13,14	C1HCDD100SL	Ceramic 10pF	50V	$\pm 0.5\%$
15,16				
C17,18	C1EUEM474A	Alsicon 0.47 μ F	25V	$\pm 20\%$
C19,20	C1HCDK471SL	Ceramic 470pF	50V	$\pm 10\%$
C21,22	C1ERB-106A	Electrolytic 10 μ F	25V	
C23,24	C1HCDK270SL	Ceramic 27pF	50V	$\pm 10\%$
26				
C27,28	C1HRB-227A	Electrolytic 220 μ F	50V	
29,30				
C31,32	C1HFRM153A	Mylar 0.015 μ F	50V	$\pm 20\%$
33,34				
C35,36	C1HFRM104A	Mylar 0.1 μ F	50V	$\pm 20\%$

SEMICONDUCTORS

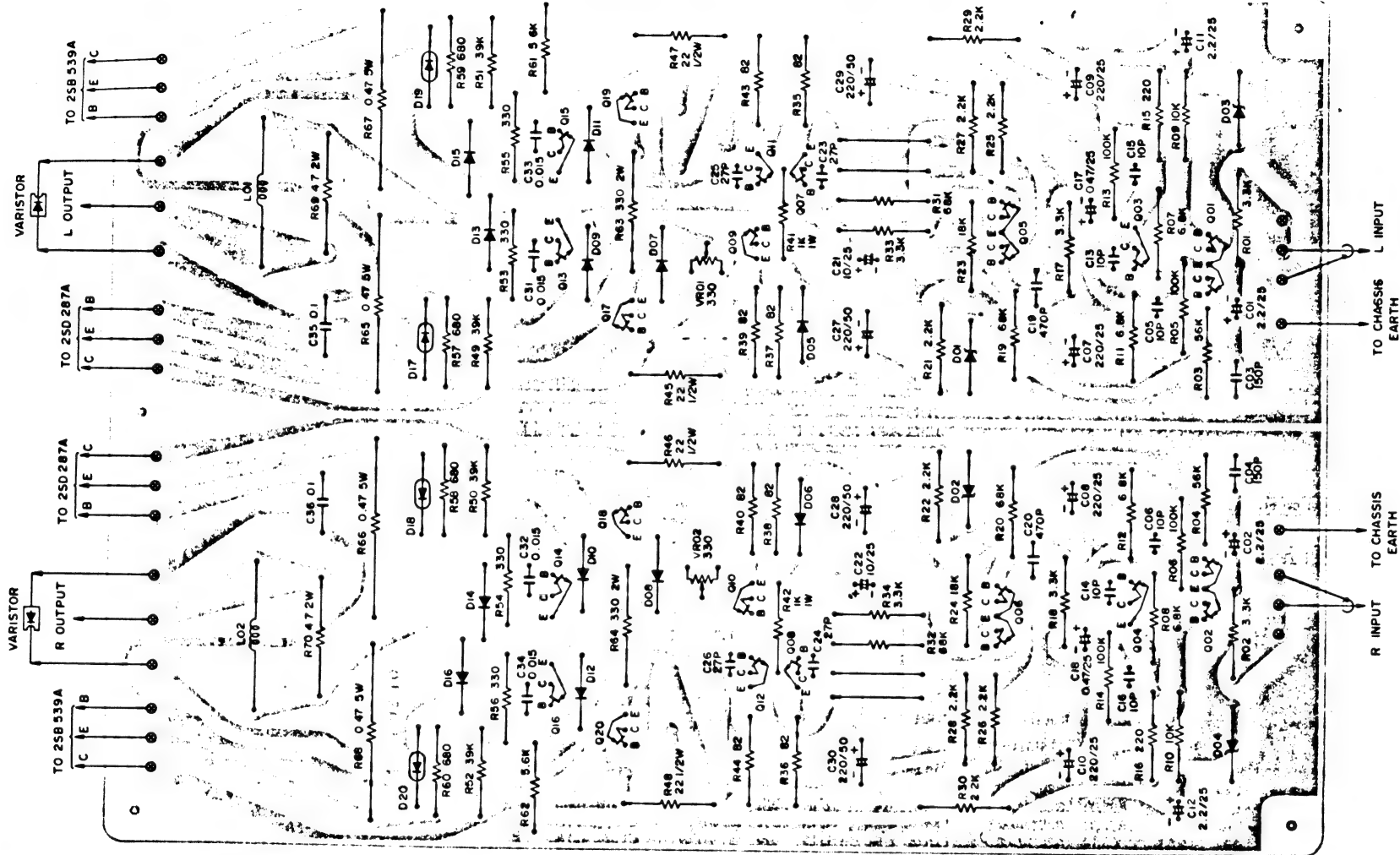
D01,02	DJJ-WZ-210	Diode WZ-210
03,04		
D05,06	2055 9040 44210	Diode DS-442
07,08		
09,10		
11,12		
13,14		
15,16		
Q01,02	TMM-2SA798--F	TR 2SA798 F
Q03,04	2035 5151 57079	TR 2SA1570 LG
Q05,06	TMM-2SA798--F	TR 2SA798 F
Q07,08	2035 4900 60040	TR 2SD600 D
Q09,10	2035 4910 63140	TR 2SB631 D
11,12	2035 4900 60040	TR 2SD600 D
Q13,14	2035 6701 17550	TR 2SC1175 E
Q15,16	2035 6800 65950	TR 2SA659 E
Q17,18	TMM-2SD358--D	TR 2SD358 D
Q19,20	TMM-2SB528--D	TR 2SB528 D

Ref. No.	Part Number	Description
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RESISTORS

R01,02	R2EDVJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R03,04	R2EDVJ563A	Carbon 56k	1/4W $\pm 5\%$
R05,06	R2EDVJ104A	Carbon 100k	1/4W $\pm 5\%$
R07,08	R2EDVJ682A	Carbon 6.8k	1/4W $\pm 5\%$
R09,10	R2EDVJ103A	Carbon 10k	1/4W $\pm 5\%$
R11,12	R2EDVJ682A	Carbon 6.8k	1/4W $\pm 5\%$
R13,14	R2EDVJ104A	Carbon 100k	1/4W $\pm 5\%$
R15,16	R2EDVJ221A	Carbon 220	1/4W $\pm 5\%$
R17,18	R2EDVJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R19,20	R2EDVJ683A	Carbon 68k	1/4W $\pm 5\%$
R21,22	R2EDVJ222A	Carbon 2.2k	1/4W $\pm 5\%$
R23,24	R2EDVJ183A	Carbon 18k	1/4W $\pm 5\%$
R25,26	R2EDVJ222A	Carbon 2.2k	1/4W $\pm 5\%$
27,28			
29,30			
R31,32	R2EDVJ683A	Carbon 68k	1/4W $\pm 5\%$
R33,34	R2EDVJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R35,36	R2EDVJ820A	Carbon 82	1/4W $\pm 5\%$
37,38			
39,40			
R41,42	R3AXBJ102A	Oxide Metal Film 1k 1W	$\pm 5\%$
R43,44	R2EDVJ820A	Carbon 82	1/4W $\pm 5\%$
R45,46	R2HZPK220A	Fuse 22	1/2W $\pm 10\%$
47,48			
R49,50	R2EDVJ393A	Carbon 39k	1/4W $\pm 5\%$
51,52			
R53,54	R2EDVJ331A	Carbon 330	1/4W $\pm 5\%$
55,56			
R57,58	R2EDVJ681A	Carbon 680	1/4W $\pm 5\%$
59,60			
R61,62	R2EDVJ562A	Carbon 5.6k	1/4W $\pm 5\%$
R63,64	R3DXBJ331A	Oxide Metal Film 330 2W	$\pm 5\%$
R65,66	R3HEPKR47A	Cement 0.47	5W $\pm 10\%$
67,68			
R69,70	R3DXBJ4R7A	Oxide Metal Film 4.7 2W	$\pm 5\%$

POWER AMP P.C. BOARD



TRANSISTOR DC VOLTAGES									
SYMBOL NO	DEVICE	B	C	E	C	B	SYMBOL NO	DEVICE	B
Q01,02	2SA798	0.012V	-19.4V	0.59V	-20.9V	0.01V	Q11,12	2SD358	-51.2V
Q03,04	2SD358	-19.4V	-0.03V	-20.6V			Q13,14	2SD358	-0.292V
Q05,06	2SA798	0.069V	-42.5V	0.688V	-42.5V	0.075V	Q15,16	2SA659	-0.292V
Q07,08	2SD6000	-51.7V	-31.9V	-52.1V			Q17,18	2SD358	1.18V
Q09,10	2SD631D	52.1V	1.18V	43.3V			Q19,20	2SD631D	-1.21V

TRANSISTOR FRONT VIEW



Q01,02
05,06
2SA798



Q03,04
2SD358
Q13,14
2SD358
Q15,16
2SA659



Q07,08
11,12
2SD6000
Q09,10
2SD631D



Q17,18
2SD358
Q19,20
2SD528

BOTTOM VIEW
DIODE FRONT VIEW

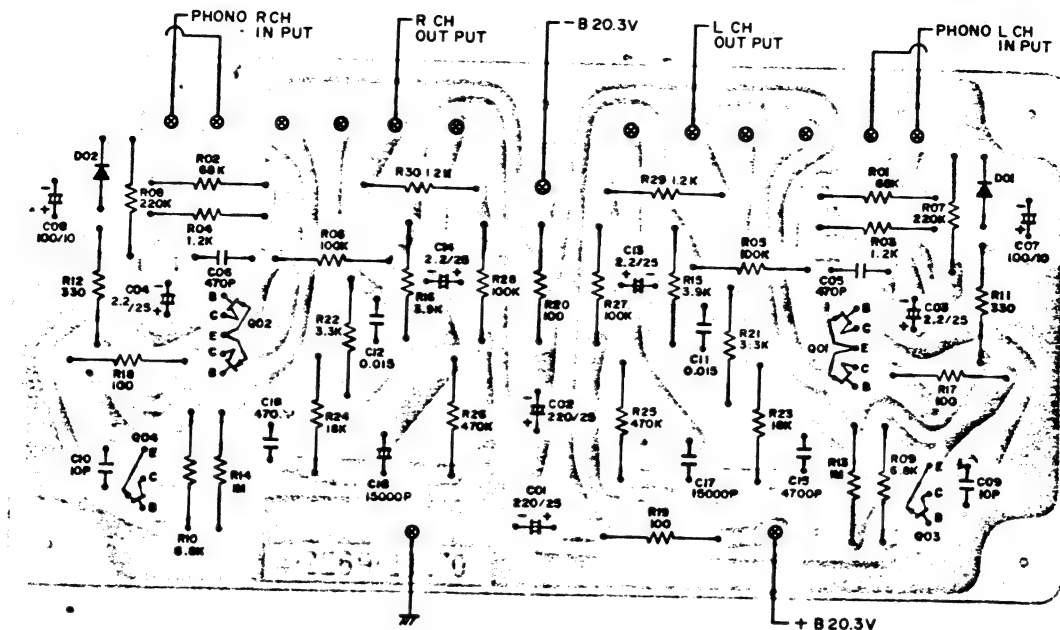


DOI-04 WZ 210
D05-16 DS-442

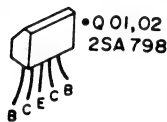


D17-20 SV-04

EQ P.C. BOARD



TRANSISTOR FRONT VIEW

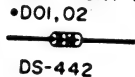


•Q 01,02
2SA 798

DIODE FRONT VIEW



•Q 03,04
2SC1570



•D01,02
DS-442

BOTTOM VIEW

TRANSISTOR DC VOLTAGES						
SYMBOL NO.	DEVICE	B	C	E	C	B
Q01,02	2SA798	0.45V	-18.7V	0.61V	-19.3V	0.05V
Q03,04	2SC1570	-18.7V	-0.04V	-18.8V		

PARTS LIST

EQ PCB Assy
1310 4001 73101

Ref. No. Part Number Description

CAPACITORS

C01,02	C1ERE-227A	Electrolytic 220 μ F 25V
C03,04	C1EUEM225A	Alsicon 2.2 μ F 25V $\pm 20\%$
C05,06	C1HCDK471SL	Ceramic 470pF 50V $\pm 10\%$
C07,08	C1ARE-107A	Electrolytic 100 μ F 10V
C09,10	C1HCSD100SL	Ceramic 10pF 50V $\pm 0.5\%$
C11,12	C1HFRM273A	Mylar 0.015 μ F 50V $\pm 20\%$
C13,14	C1EUEM225A	Alsicon 2.2 μ F 25V $\pm 20\%$
C15,16	C1HSEJ472A	Styrol 4700pF 50V $\pm 5\%$
C17,18	C1HSEJ153A	Styrol 15000pF 50V $\pm 5\%$

SEMICONDUCTORS

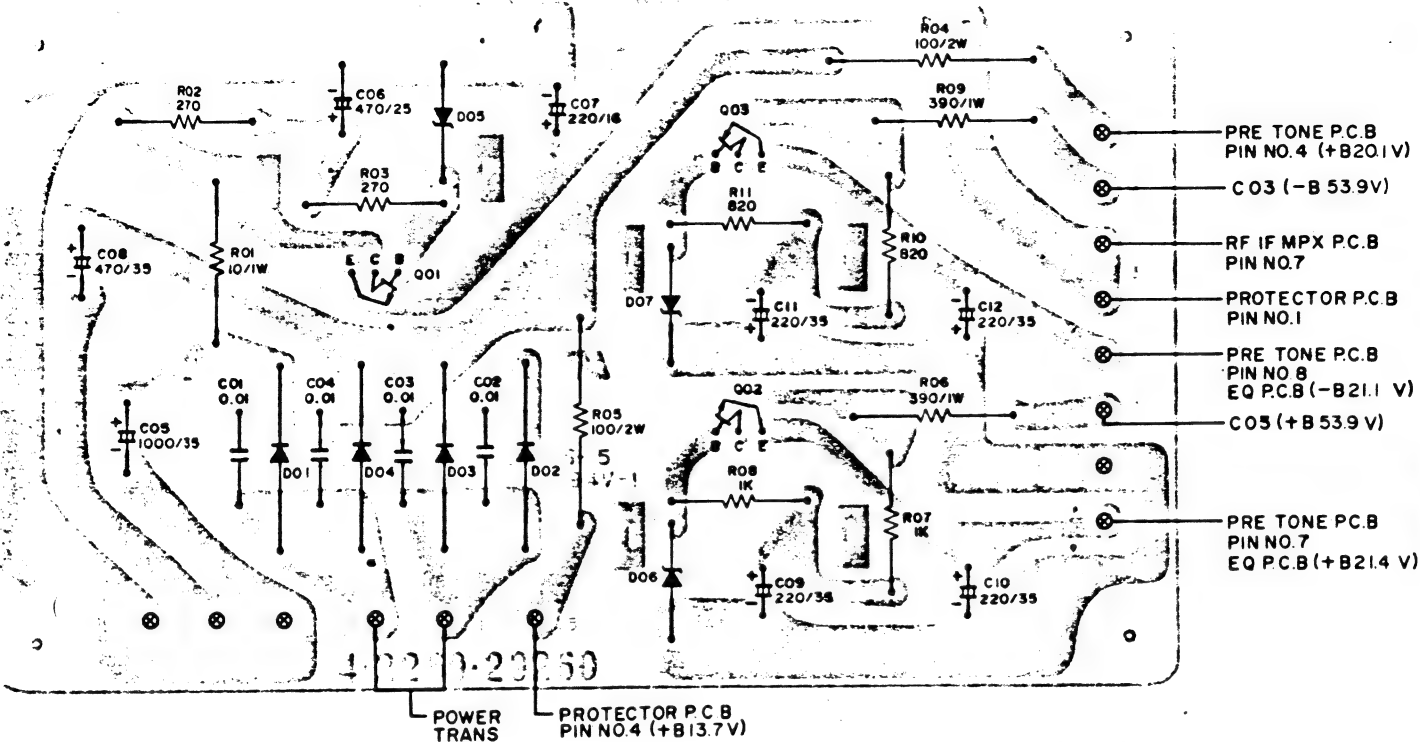
D01,02	2055 9040 44210	Diode DS-442
Q01,02	TMM-2SA798-F	TR 2SA798 F
Q03,04	2035 5151 57079	TR 2SC1570 LG

Ref. No. Part Number Description

RESISTORS

R01,02	R2EDVJ683A	Carbon 68k	1/4W $\pm 5\%$
R03,04	R2EDVJ122A	Carbon 1.2k	1/4W $\pm 5\%$
R05,06	R2EDVJ104A	Carbon 100k	1/4W $\pm 5\%$
R07,08	R2EDVJ224A	Carbon 220k	1/4W $\pm 5\%$
R09,10	R2EDVJ682A	Carbon 6.8k	1/4W $\pm 5\%$
R11,12	R2EDVJ331A	Carbon 330	1/4W $\pm 5\%$
R13,14	R2EDVJ105A	Carbon 1M	1/4W $\pm 5\%$
R15,16	R2EDVJ392A	Carbon 3.9k	1/4W $\pm 5\%$
R17,18	R2EDVJ101A	Carbon 100	1/4W $\pm 5\%$
R19,20			
R21,22	R2EDVJ332A	Carbon 3.3k	1/4W $\pm 5\%$
R23,24	R2EDVJ183A	Carbon 18k	1/4W $\pm 5\%$
R25,26	R2EDVJ474A	Carbon 470k	1/4W $\pm 5\%$
R27,28	R2EDVJ104A	Carbon 100k	1/4W $\pm 5\%$
R29,30	R2EDVJ122A	Carbon 1.2k	1/4W $\pm 5\%$

POWER SUPPLY P.C.BOARD



TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SD330	13.0V	18.9V	12.41V
Q02	2SD330	22.0V	39.7V	21.4V
Q03	2SB514	-21.7V	-39.9V	-21.1V

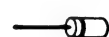
BOTTOM VIEW

TRANSISTOR FRONT VIEW



- Q 01, 02
2SD 330
- Q03
2SB514

DIODE FRONT VIEW



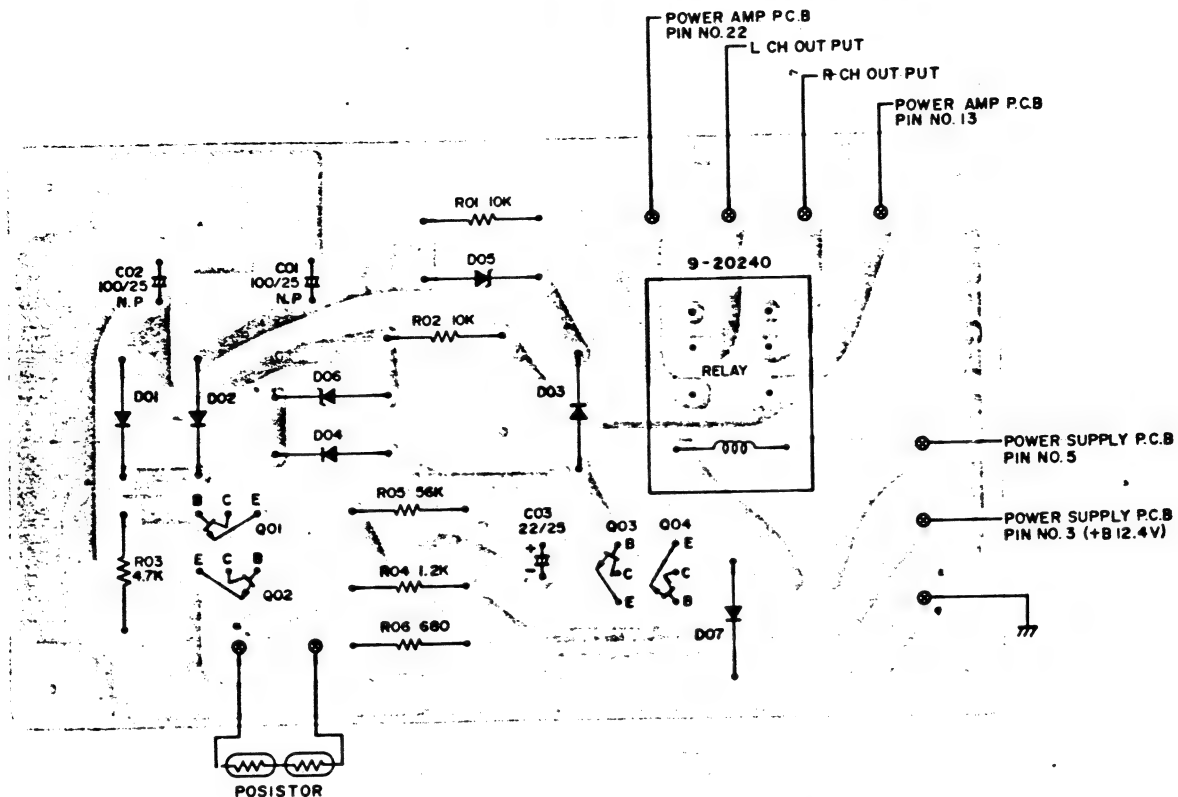
- D05 WZ 130
- D06,07 WZ 210
- D01~04 DS130

PARTS LIST

POWER SUPPLY PCB Assy
310 4001 73002

Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
CAPACITORS			RESISTORS		
01,02	C2HYDP103A	Ceramic 0.01 μ F 500V +100,-0 %	R01	R3AXB100A	Oxide Metal Film 10 1W \pm 5 %
03,04			R02,03	R2EDVJ271A	Carbon 270 1/4W \pm 5 %
05	C1VRE-108A	Electrolytic 1000 μ F 35V	R04,05	R3DXBJ101A	Oxide Metal Film 100 2W \pm 5 %
06	C1ERE-477A	Electrolytic 470 μ F 25V	R06,09	R3AXB1391A	Oxide Metal Film 390 1W \pm 5 %
07	C1CRE-227A	Electrolytic 220 μ F 16V	R07,08	R2EDVJ102A	Carbon 1K 1/4W \pm 5 %
08	C1VRE-477A	Electrolytic 470 μ F 35V	10,11		
09,10	C1VRE-227A	Electrolytic 220 μ F 35V			
11,12					
SEMICONDUCTORS					
01,02	2025 2310 13020	Diode DS130YD			
03,04					
05	DJJ-WZ-130	Diode WZ-130			
06,07	DJJ-WZ-210	Diode WZ-210			
01,02	2035 8220 33050	TR 2SD330 E			
03	2035 6460 51440	TR 2SB514 D			

PROTECTOR P.C.BOARD



BOTTOM VIEW

TRANSISTOR DC VOLTAGES

SYMBOL NO.	DEVICE	B	C	E
Q01	2SC536	0.02V	5.55V	0.045V
Q02	2SC536	0.045V	5.55V	0V
Q03	2SC536	2.16V	1.62V	1.5V
Q04	2SC1175	1.5V	1.62V	0.74V

TRANSISTOR FRONT VIEW



- Q01 ~ 03 2SC536
- Q04 2SC1175

DIODE FRONT VIEW



- D01~04 DS-442
- D05,06 RD-6.2E
- D07 DS-130

PARTS LIST

PROTECTOR PCB Assy
1310 4001 72900

Ref. No. Part Number Description

4 2329 20240 Relay

CAPACITORS

C01,02 C1EAEN107A Electrolytic 100 μ F 25V $\pm 30\%$
C03 C1ERE-226A Electrolytic 22 μ F 25V

SEMICONDUCTORS

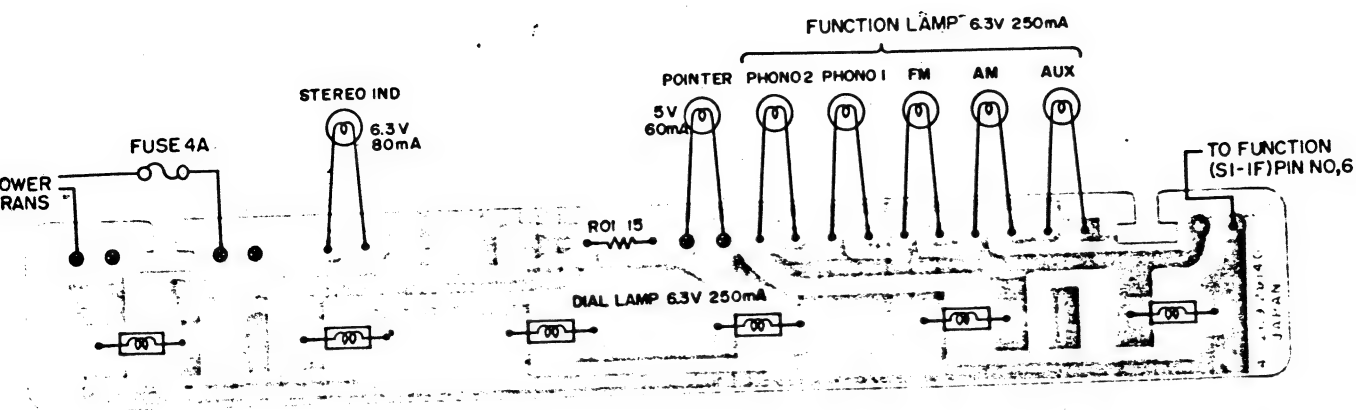
D01,02 2055 9040 44210 Diode DS-442
03,04
D05,06 DNN-RD6.2E Diode RD-6.2 E
D07 2025 2310 13020 Diode DS130 YD
Q01,02 2035 5100 53650 TR 2SC536 E
03
Q04 2035 6701 17550 TR 2SC1175 E

Ref. No. Part Number Description

RESISTORS

R01,02 R2EDVJ103A Carbon 10k 1/4W $\pm 5\%$
R03 R2EDVJ472A Carbon 4.7k 1/4W $\pm 5\%$
R04 R2EDVJ122A Carbon 1.2k 1/4W $\pm 5\%$
R05 R2EDVJ563A Carbon 56k 1/4W $\pm 5\%$
R06 R2EDVJ681A Carbon 680 1/4W $\pm 5\%$

DIAL LAMP P.C.BOARD



BOTTOM VIEW

PARTS LIST

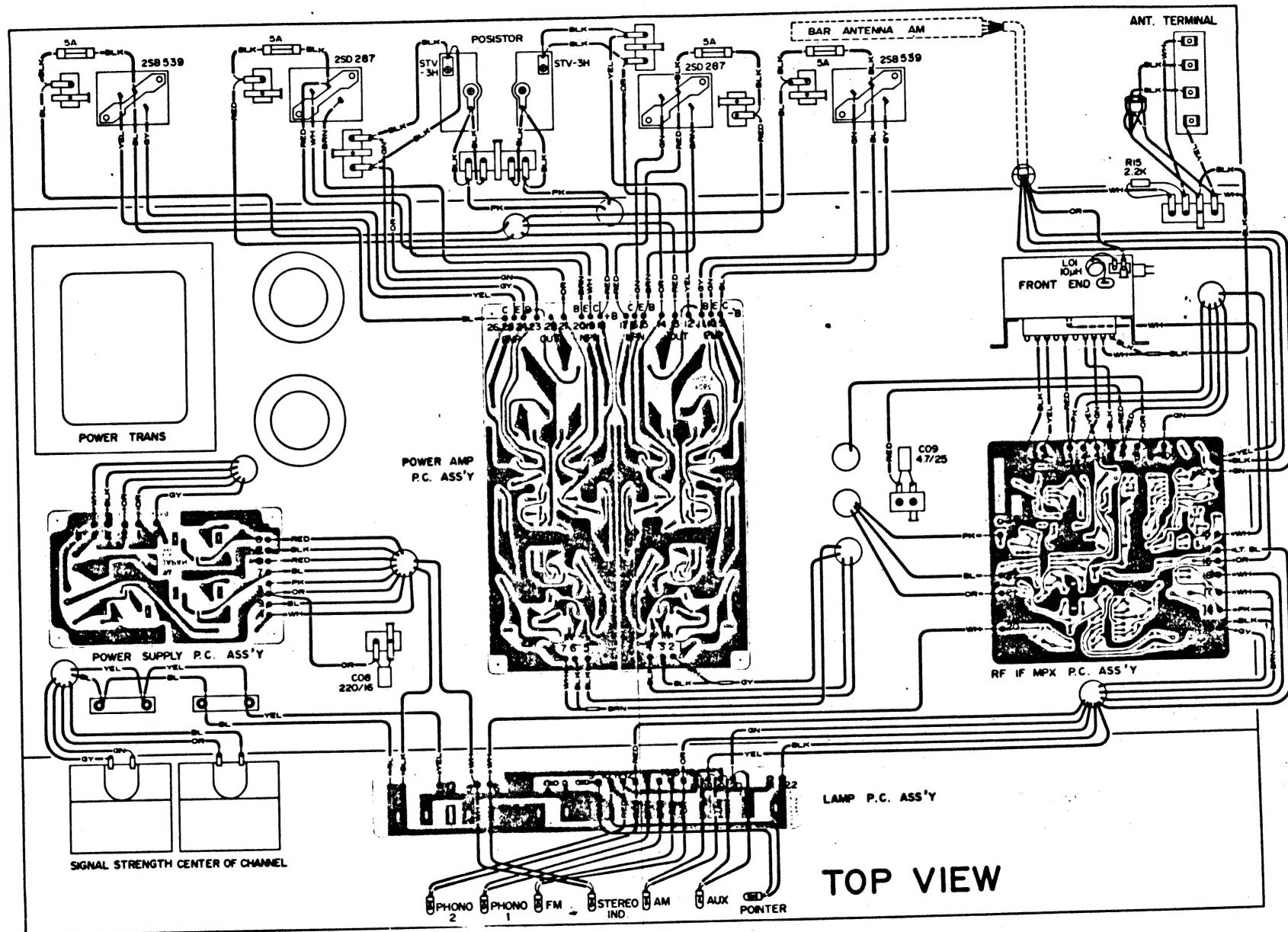
DIAL LAMP PCB Assy
1310 4001 72163

Ref. No.	Part Number	Description
	4 2359 20930	Lamp Holder
63	4 6129 20219	Small Lamp IND 6.3V 80mA
	4 6129 20280	Pilot Lamp 6.3V 250mA (Dial Lamp)
		(Function Lamps)
81-1	4 6129 20430	Pilot Lamp 6.3V 80mA
81-2	4 6129 20431	Pilot Lamp 6.3V 80mA
81-3	4 6129 20432	Pilot Lamp 6.3V 80mA
81-4	4 6129 20216	Pilot Lamp 6.3V 80mA
81-5	4 6129 20433	Pilot Lamp 6.3V 80mA

RESISTORS

R01	R2EDSJ150A	Carbon 15	1/4W ± 5 %
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POINT TO POINT WIRING DIAGRAM



TOP VIEW

BOTTOM VIEW

RS-1058



NOTES

PACKING PARTS LIST

Part Number	Description
1316 1139 61103	Box Corrugate-EXP
1316 2119 01351	Bag Polyethylene-EXP
1316 2119 01470	Bag Polyethylene-EXP
1316 3009 22150	Pad (Right)
1316 3009 22160	Pad (Left)

ACCESSORIES PARTS LIST

Part Number	Description
1316 4119 59005	Explanatory Booklet English
1316 4119 59007	Explanatory Booklet German
1316 4519 14700	Guarantee Certificate
4 2449 20230	Antenna FM